

OPEN MEETING

MEMORANDUM

TO: THE COMMISSION

FROM: Utilities Division

DATE: June 29, 2021

RE: IN THE MATTER OF THE APPLICATION OF ARIZONA PUBLIC SERVICE COMPANY FOR A RULING RELATING TO ITS 2021 DEMAND SIDE MANAGEMENT IMPLEMENTATION PLAN.
(DOCKET NO. E-01345A-20-0151)

SUBJECT: APPLICATION FOR APPROVAL OF AMENDED 2021 DEMAND SIDE MANAGEMENT IMPLEMENTATION PLAN.

INTRODUCTION

Enclosed are the Commission Staff's memorandum and proposed order In the Matter of the Application of Arizona Public Service Company for a Ruling Relating to its 2021 Demand Side Management Implementation Plan (Docket No. E-01345A-20-0151). This is only a Staff recommendation to the Commission; it has not yet become an order of the Commission. The Commission can decide to accept, amend or reject Staff's proposed order.

You may file comments to the recommendation(s) of the proposed order by e-filing at <https://efiling.azcc.gov/> or filing an original and thirteen (13) copies of the comments with the Commission's Docket Control Center at 1200 West Washington Street, Phoenix, Arizona 85007 by 4:00 p.m. on or before **July 8, 2021**.

This matter may be scheduled for Commission deliberation at its Open Meetings scheduled **July 13, 2021, at 10:00 a.m. and July 14, 2021, at 10:00 a.m.**

If you have any questions about this matter, please contact Candrea Allen of our Staff at (602) 364-0235, or Elijah Abinah, Director, at (602) 542-6935.

BACKGROUND

On December 31, 2020, Arizona Public Service Company ("APS" or "Company") filed with the Arizona Corporation Commission ("Commission") an application for approval of its 2021 Demand Side Management ("DSM") Implementation Plan ("2021 DSM Plan" or "Original Plan") pursuant to the Energy Efficiency Standard ("EE Rules") set forth in Arizona Administrative Code ("A.A.C.") R14-2401 through R14-2419. On April 6, 2021, APS filed an Amended 2021 DSM Implementation Plan ("Amended 2021 DSM Plan") for Commission review and approval. The Amended 2021 DSM Plan replaces the Original Plan in its entirety.

AMENDED 2021 DSM PLAN

The APS Amended 2021 DSM Plan proposes to continue the current Commission-approved DSM portfolio of measures or programs targeted to multiple customer segments that were approved in the 2020 DSM Plan. APS states that the Company intends to continue the current incentive levels approved in the 2020 DSM Plan unless otherwise specified herein. The Amended 2021 DSM Plan also proposes to continue to offer its approved measures or programs designed specifically to assist customers who have been impacted by COVID-19.

The focus of the Commission Utilities Division Staff's ("Staff") review is on new, modified, and/or expanded measures and programs proposed in APS's Amended 2021 DSM Plan. Therefore, Staff did not conduct cost-benefit analyses for measures or programs previously approved by the Commission. For measures or programs in which Staff conducted a cost-benefit analysis, Staff performed its analysis in accordance with A.A.C. R14-2-2412(B), which requires that the Societal Test be used for determining cost-effectiveness of DSM measures or programs. Under the Societal Test, for a program or measure to be considered cost-effective, the ratio of benefits to costs must be greater than one. Staff used this method to determine if a program or measure is cost-effective and, as such, based its recommendations on the results of the Societal Test.

The table below shows the current Commission-approved programs included in APS's DSM Portfolio:

Residential Programs	
Existing Homes Program	
Residential New Construction	
Multi-Family Energy Efficiency	
Limited Income Weatherization	
Conservation Behavior**	
Residential Energy Storage Pilot*	
Non-Residential Programs (Solutions for Business)	
Existing Facilities	
New Construction and Major Renovation	
Schools	
Energy Information Services	
DSM Initiatives (both Residential and Non-Residential)	
Demand Response Programs	
Energy Storage and Load Management Initiative (Rewards)**	
Building Codes and Appliance Standards Initiative**	
APS System Savings	
EV Charging Demand Management	
Energy and Demand Education	
Peak Rewards Initiative	
Tribal Communities Energy Efficiency	

*Approved as part of APS's 2020 Renewable Energy Standard Implementation Plan (Decision No. 77762). **APS is not proposing any modifications to these programs. Therefore, Staff did not include discussion of these programs in its report.

A. Residential Programs

1. *Existing Homes Program*

Description

The Existing Homes Program (“EHP”) combines LED lighting, energy efficient smart thermostats, energy efficient Heating, Ventilation, and Air Conditioning (“HVAC”) equipment, and Home Performance with ENERGY STAR® offerings into one comprehensive program. The program encourages residential customers to purchase energy efficient products, the proper installation of energy efficient HVAC equipment, and promotes a whole house approach to energy efficiency. The current EHP structure was approved in Decision No. 77763.

Modifications

To help customers who have been impacted by COVID-19, APS is proposing to continue the increased funding for the higher incentives and modified program requirements for qualifying emergency HVAC replacements approved in Decision No. 77763. The COVID-19 Quality Installation incentive will continue at \$1,000 per unit for all qualifying 14 Seasonal EE Ratio (“SEER”) units, and \$1,200 per unit for all qualifying equipment 15 SEER and above.

In addition, APS is proposing to extend the installation period from the end of 2020 to October 9, 2021, the end of the 2021 summer moratorium period for disconnections due to non-payment. To qualify for the increased incentive, customers must meet the following requirements:

- The HVAC unit must be an emergency replacement of existing HVAC equipment that has failed or is failing. The incentive does not apply to early replacement of working equipment, or to new HVAC units that are not replacing existing equipment.
- Customers must self-attest that they have become unemployed due to COVID-19 and will be required to sign a form that confirms they meet the program requirements.
- HVAC units may be replaced until funding is no longer available or until the Commission approves a discontinuation of the additional COVID-19 funding.

Customers who do not meet the requirements to receive the increased incentives may still qualify to receive the \$200 Quality Installation incentive if they meet all other current program requirements. APS is not proposing any other modifications to the EHP.

Staff Recommendations

Staff recommends approval of the proposed continuation of the COVID-19 Quality Installation incentive of \$1,000 per unit for all qualifying 14 SEER units, and \$1,200 per unit for all qualifying equipment 15 SEER and above as part of the Existing Homes Program. The expanded incentive levels do not impact cost-effectiveness. In addition, Staff believes that it is appropriate to continue the enhanced program offerings related to COVID-19.

2. Residential New Construction Program

Description

The Residential New Construction Program promotes high-efficiency construction practices for new homes. The program offers incentives to builders that meet the energy efficiency requirements of the program. The program is based on the Environmental Protection Agency's ("EPA") ENERGY STAR® version 3 new homes certification and includes additional energy efficiency requirements. The program also includes builder incentives to install connected electric water heater and Electric Vehicle ("EV") ready pre-wiring. EV ready pre-wiring accommodates future installation of EV charging stations. The current Residential New Construction Program structure was approved in Decision No. 77763.

Modifications

APS is proposing a new energy efficiency measure that would offer \$200 per home for participating homebuilders who install HVAC ducting in conditioned spaces. A conditioned space is one that uses some form of HVAC for heating and/or cooling (living areas) versus an unconditioned space which is one that does not typically utilize any HVAC for heating and/or cooling (attics or garages). APS states that HVAC installation in conditioned spaces can result in approximately 10 percent annual HVAC savings each year over the life of the home.

Traditional ducting can leak into unconditioned spaces which results in heating and cooling waste and also leads to air infiltration and pressure imbalances that can pull unhealthy attic air into living spaces. APS states that ductwork installed in conditioned spaces can save energy, improve indoor air quality and comfort, and provide cost-effective saving.

This new measure would be promoted as a prescriptive measure. Participating builders can qualify for the \$200 incentive in addition to the ENERGY STAR® homes incentive. However, the energy savings from this measure cannot be included as part of the ENERGY STAR® qualification using the Home Energy Rating System ("HERS") score performance path.

Staff Recommendations

Staff found the HVAC ducting in conditioned spaces to be cost-effective with a ratio of 1.20. Therefore, Staff recommends approval of the HVAC ducting in conditioned spaces measure as described herein.

3. *Multi-Family Energy Efficiency Program*

Description

The Multi-Family Energy Efficiency Program ("MEEP") encourages efficiency improvements of multi-family properties and dormitories by using a two-track approach intended to target existing and new construction multi-family buildings. Track one targets existing multi-family properties providing direct-install retrofit measures at no cost to the existing multi-family community. However, the direct-install measures must be installed by facility personnel. In addition, this track offers energy assessments to help identify additional energy savings opportunities and available APS rebates within the multi-family complex but outside of the individual dwelling units (such as common area buildings, swimming pools, outdoor lighting, and laundries). Track two is for new construction/major renovations that offers a per-dwelling incentive for projects that build or renovate to a higher level of efficiency. Incentives increase as a higher level of efficiency is achieved. The current MEEP structure was approved in Decision No. 77763.

Modifications

APS is proposing to integrate the implementation of the MEEP utilizing the same implementation contractor who delivers the Solutions for Business program. APS states that this will help streamline program delivery, reduce overhead costs, and facilitate more comprehensive multi-family projects including efficiency upgrades in common areas served by non-residential meters in addition to individual residential units. Beginning with its 2021 DSM Annual Progress Report, APS intends to consolidate reporting of all savings achieved in multi-family properties within the MEEP (both residential rental units and non-residential common areas).

Staff Recommendations

Staff recommends approval of the proposed modifications to the MEEP as these modifications would improve the cost-effectiveness of measures that have already been found to be cost effective.

4. *Limited Income Weatherization Program*

Description

The Limited Income Weatherization Program ("LIWP") provides support to residential customers who have the most difficulty affording their energy costs. The LIWP is designed to improve the energy efficiency, safety, and health attributes of homes occupied by customers whose income falls within 200 percent of the federal poverty level. The weatherization component offers various home improvement measures including cooling system repair and replacement, insulation, sunscreens, water heaters, window repairs and improvements, and other general household repairs. The LIWP is administered by various community action agencies

throughout APS's service territories. The current LIWP structure was approved in Decision No. 77763.

Modifications

In Decision No. 77763, APS was approved for an increase in the per home spending cap from \$6,000 to \$9,000. The increase in the per home spending cap was to end December 31, 2020. However, APS is proposing to continue the increased per home spending cap of \$9,000 until the end of 2021. APS states that the increased per home spending cap allows for larger energy efficiency projects, including emergency HVAC replacement and related repairs in cases where additional assistance dollars may not be available.

Staff Recommendations

Staff recommends approval of the proposed continuation of the increased per home spending cap of \$9,000 until the end of 2021, for the LIWP as this modification does not impact cost-effectiveness.

5. *Residential Energy Storage Pilot*

Description

Decision No. 77762 (dated October 2, 2020), approved the Residential Energy Storage Pilot ("Storage Pilot") which was included in APS's 2020 Renewable Energy Standard and Tariff ("REST") Implementation Plan ("REST Plan"). In that Decision, the Commission ordered that the Storage Pilot be included in its 2021 DSM Plan to address the program budget. The Commission-approved Storage Pilot offers customers a one-time incentive of \$500/Kilowatt ("kW"), with a cap of \$2,500/home to customers who install residential battery systems and enroll in a Time-of-Use ("TOU") or TOU plus demand rate plan. In addition, customers must commit to discharging their batteries during on-peak periods.

Customers who are adding batteries to existing solar systems who are grandfathered net metering customers are entitled to retain their grandfathered status and current rate plan. Those customers with a Resource Comparison Proxy ("RCP") rate are entitled to retain their current RCP rate. Customers who participate in the Storage Pilot also agree to connect their batteries to the APS resource operating platform and share battery information. Further, Decision No. 77762, as amended by Decision Nos. 77855 and 77958, requires APS to develop and file a Distributed Demand-Side Aggregation Tariff ("DDSR Aggregation Tariff") which "[permits] the aggregation of distributed energy storage systems that provides compensation for the value each system provides, including, but not limited to compensation for capacity, demand reduction, load shifting, locational value, voltage support, ancillary and grid services, and any other operating characteristic the Commission may deem appropriate."

Modifications

APS is proposing to offer an additional \$1,250 one-time upfront incentive to customers who agree to share a portion of their battery capacity to serve grid needs. Customers would receive the additional incentive for a three-year commitment to share up to 80 percent of their storage system's capacity for a maximum of 100 events per year. APS states that this option would help inform the DDSR Aggregation Tariff currently in development pursuant to Decision No. 77762, and will provide valuable data on DDSR technology performance.

Staff Recommendations

Staff recommends approval of the proposed modification to offer an additional \$1,250 one-time upfront incentive to customers who agree to share a portion of their battery capacity to serve grid needs as part of the Storage Pilot as this modification does not impact cost-effectiveness.

B. Non-Residential Programs (Solutions for Business)

6. *Existing Facilities Program*

Description

The Existing Facilities Program ("EFP") provides prescriptive incentives to owners and operators of non-residential facilities for DSM improvements in lighting, HVAC, motors, building envelope, and refrigeration measures. In addition, the EFP offers incentives for pilot electrification measures including forklifts, airport vehicles, and standby truck refrigeration. Further, the EFP also offers custom incentives that are evaluated individually based on energy savings.

7. *New Construction and Major Renovation Program*

Description

The New Construction and Major Renovation ("NCMR") Program includes three components: (1) design assistance; (2) prescriptive measures; and (3) custom efficiency measures. Design assistance involves integration of energy efficiency into a customer's design process to influence equipment/systems selection specification as early in the process as possible. Prescriptive and custom measures such as lighting, HVAC, motors, building envelope, and refrigeration measures. In addition, the New Construction custom efficiency measures component includes Whole Building Design which encourages customers, developers, and design professionals to design, and build, and invest in higher performing buildings through a tiered performance incentive structure. Incentives increase as the building performance improves.

8. *Schools Program*

Description

The Schools Program sets aside funding for K-12 school buildings (public, private, and charter). The DSM measures and incentives available for schools are the same that are available for all non-residential programs including lighting and refrigeration. Once schools fully subscribe to the Schools Program, or once a school reaches the cap of \$100,000 per year, schools can participate in other non-residential programs. Incentive levels are the same as the Existing Facilities (for existing school facilities) and New Construction (for new school construction and major renovations). APS also offers the same DSM measures in the Schools Program to qualifying non-profit community organizations.

9. *Energy Information Services Program*

Description

The Energy Information Services Program ("EIS") helps customers with greater than 100 kW demand save energy through better understanding and control over the facilities' energy use. The EIS Program provides segmented 15-minute interval electric usage data to large non-residential customers using a web-based energy informational tool. The tool provides information that can be used to help improve or monitor energy usage patterns, reduce energy use, reduce demand during on-peak periods, and better manage overall energy operations.

Modifications for Non-Residential Programs

APS's proposed modifications would apply to more than one non-residential program. Therefore, the Modifications and Staff Recommendations sections were not separately included for each non-residential program.

Enhanced Incentives Due to COVID-19 – Decision No. 77763, approved an increased incentive for non-residential customers replacing qualified HVAC equipment (maximum size of 40 tons), up to 75 percent of incremental costs with a maximum cap of \$10,000 per unit. In addition, APS is proposing to extend the installation period from the end of 2020 to October 15, 2021, the end of the 2021 summer moratorium period for disconnections due to non-payment. To qualify for the increased incentive, customers must meet the following requirements:

- The HVAC unit must be an emergency replacement of existing HVAC equipment that has failed or is failing. The incentive does not apply to early replacement of working equipment, or to new HVAC units that are not replacing existing equipment.
- HVAC units may be replaced until funding is no longer available or until the Commission approves a discontinuation of the additional COVID-19 funding.

- Customers must meet all other current program requirements.

Customers who do not meet the conditions above may still receive the standard program incentives if they meet all other current program requirements.

New Prescriptive Energy Efficiency Measures – APS is proposing two new prescriptive energy efficiency measures (1) ductless mini-split heat pumps and (2) hotel room occupancy sensors. The ductless mini-split heat pumps will be offered as part of the EFP and the hotel room occupancy sensors will be offered as part of both the EFP and the NCMR Program.

- Ductless mini-split heat pumps are an alternative to conventional HVAC systems that rely on ducts to distribute air throughout a space. Ductless mini-split heat pumps may be a good option for small spaces or when extending existing duct work or installing duct work is not feasible.¹ According to APS, because ductless mini-split heat pumps are available up to 25 SEER efficiency level, they are a more efficient alternative for cooling and heating compared to window or in-room AC units and electric resistance heating. APS is proposing to offer an incentive of up to \$10 per kilo-British Thermal Unit (“kBTU”)/hour for the installation of new ductless mini-split heat pumps in qualifying facilities.
- Hotel room occupancy sensors detect indoor activity within a certain area. The sensors can save energy by turning lights off soon after an occupant has left the room. APS states that the sensors can use different technology options, such as motion detection, thermal occupancy sensors, and network presence sensing, to determine if a hotel room is occupied. If a room is unoccupied, the sensors can be used to automatically adjust thermostat temperatures, shut off lighting, and turn off other in-room electronics such as televisions. In addition, the sensors can be included as part of a whole hotel-wide energy management system to further reduce energy waste and curtail peak demand. APS is proposing to offer an incentive of up to \$50 per unit for the installation of new hotel occupancy sensors.

Pushback Tugs – APS is reintroducing this Electrification Pilot Measure. Pushback tugs were proposed by APS in its 2020 DSM Plan. However, Staff did not find the measure to be cost-effective at that time. APS states that the Company discovered that inaccurate incremental costs were used in the calculations included in the 2020 DSM Plan that resulted in the measure not being cost-effective. Pushback tugs would be offered through the EFP and NCMR Program.

Pushback tugs are specialized vehicles that carry out the pushback procedure in which an aircraft is pushed backwards away from its parking position, typically an airport gate.² APS states that, currently, pushback tugs are typically operated using gasoline-powered internal combustion engines and shifting to electricity can reduce energy costs, improve energy

¹ <https://www.energy.gov/energysaver/heat-pump-systems/ductless-mini-split-heat-pumps>

² <https://en.wikipedia.org/wiki/Pushback>

efficiency, lower emissions, and create a safer, healthier, and quieter work environment. APS is proposing to offer an average incentive of approximately \$5,000 per unit.

Modify Non-Residential Programs' Delivery Approach for HVAC Measures – APS is proposing to transition non-residential programs to a midstream incentive program design by 2022 to achieve more cost-effective, large-scale savings. A midstream program design focuses on engaging distributors to accelerate the introduction and sale of more efficient products to a broader customer base when offered as a component of traditional Commercial and Industrial (“CAI”) programs. With this model, distributors provide a point-of-sale discount to contractors who purchase qualifying EE equipment. The distributor then submits required measure and sale documentation that is then validated by a third-party administrator. The third-party administrator reimburses the distributor for providing the rebate to contractors.

APS states that a broader range of contractors and customers are more likely to take advantage of EE incentives when the incentives are provided at the register without requiring the contractors or customers to submit paperwork in order to receive those incentives. In addition, APS states that the midstream model allows distributors to modify their business model to allow them to control the application of incentives instead of relying on contractors' willingness to submit program applications. As a result, the distributor has the ability to stock more efficient equipment with the greater chance of selling the equipment. APS would identify which measures would be most appropriate for transitioning to the midstream approach and intends to prioritize HVAC-related measures which would help broaden the reach of HVAC savings and help manage load shape and control peak demand.

APS intends to begin transitioning to the midstream model during 2021 in order to designate qualifying measures, establish implementation processes, create marketing and communications materials, and recruit and train distributors on educating contractors and customers about savings opportunities and eligibility and documentation requirements. All qualified commercial or industrial customers would be eligible to participate. Further, participating distributors must have a direct agreement with the manufacturer, and purchasers cannot be retailers. The purchaser, typically a contractor, must be involved in the installation of the EE measure. However, customers who self-install would be allowed to benefit from the program, if purchasing directly from a participating distributor. Contractors or potentially customers may also purchase directly from a manufacturer in some cases, subject to APS approval.

Staff Recommendations for Non-Residential Programs

Staff recommends approval of the proposed enhanced HVAC incentives due to COVID-19 as this modification does not impact cost-effectiveness.

Staff found the ductless mini-split heat pumps to be cost-effective with a ratio of 2.25. Therefore, Staff recommends approval of the proposed ductless mini-split heat pumps.

Staff found the hotel occupancy sensors to be cost-effective with a ratio of 1.10. Therefore, Staff recommends approval of the proposed hotel room occupancy sensors.

Staff found the pushback tugs to be cost-effective with a ratio of 4.46. Therefore, Staff recommends approval of the proposed pushback tugs.

Staff recommends approval of the proposed modification to the Non-Residential Program's delivery approach for HVAC measures, as the proposed process would improve the cost-effectiveness of HVAC measures that have already been found to be cost-effective.

C. Demand-Side Management Initiatives

10. Demand Response Programs

Description

APS's Demand Response Programs include the Peak Solutions non-residential demand response program, Critical Peak Pricing rate plans, and TOU rates.

Modifications

APS is proposing to increase the savings and participation goals for the Peak Solutions non-residential demand response program.

Staff Recommendations

Staff recommends approval of APS's proposal to increase savings and participation goals for the Peak Solution non-residential demand response program as this modification does not impact cost-effectiveness.

11. APS System Savings-2021 Projects

Description

APS system savings projects include, but are not limited to, APS generation, transmission, distribution, and facilities energy efficiency improvements. APS system savings projects also include many of the same energy saving measures installed at customer facilities but are implemented at APS facilities.

Modifications

APS is proposing the following System Savings Projects for 2021:

- Operation of Conservation Voltage Reduction systems on an estimated 14 distribution feeders throughout the APS service territory.

- EE upgrades to APS facilities including installation of new Energy Management System controls, new higher efficiency HVAC air handlers, package HVAC unit replacements, and variable frequency drives. These measures have previously been approved as part of the Solutions for Business Program. APS intends to count an estimated 6,000 Megawatt-hour ("MWh") of annual energy savings from System Savings projects in 2021.

Staff Recommendations

Staff recommends approval of the proposed System Savings projects for 2021.

12. EV Charging Demand Management Pilot

Description

Decision No. 77763, approved the EV Charging Demand Management Pilot ("EV Pilot"). This Pilot works with vehicle fleets, charging station infrastructure, and individual EV owners to gather data on EV charging behavior and to encourage off-peak charging to manage peak demand. The EV Pilot targets all EV owners within APS's service territory and includes the following elements:

- EV Charging Baseline Data: Installation of data collection devices in participating EVs to track and record their charging activity and provide baseline data on current EV charging behavior.
- Beneficial Charging Behavior: After establishing a baseline charging behavior, the program may then launch a rewards program for EV owners that would offer reward points in exchange for charging during off-peak hours.
- EV Charging Station Direct Load Control: Will work with EV charging station providers to connect EV charging stations into the APS Rewards distributed energy resource operating platform.

Modifications

APS is proposing to offer a one-time incentive of \$250 for a limited number of smart Wi-Fi connected residential Level 2 EV charging stations that can be connected to provide telemetry data on home charging behavior as well as participate in load shifting and demand response events. This incentive would be in addition to the current \$85 per year incentive offered to customers who agree to provide APS with their vehicle charging data.

Staff Recommendations

Staff recommends approval of the proposed \$250 incentive for residential Level 2 EV charging stations for the EV Pilot as this modification does not impact cost-effectiveness.

13. *Energy and Demand Education*

Description

Approved in Decision No. 76313, the Energy and Demand Education Program ("ED Program") provides customers with energy and demand management education tools such as web-based energy and demand analyzers, personalized outreach, and social media. These tools and resources help provide customers with enhanced information about their usage to better manage energy use and demand. The ED Program allows APS to offer an online marketplace that educates customers and helps them to purchase the most energy efficiency appliances, get instant rebates from APS, and links them to APS programs and energy services.

Due to COVID-19, APS offers a free "virtual checkup" home energy auditing service. APS states that the "virtual checkup" provides similar benefits to an in-person audit by using the mobile app which allows the customer to use the video feature on a phone or tablet. An experienced energy auditor observes the video remotely, while asking questions about the property and makes recommendations for energy-saving improvements. APS intends to pursue potential energy efficiency financing options to help customers better afford the upfront costs of upgrades and improvements, either through the APS marketplace or with other potential providers.

Staff Recommendations

Staff recommends that APS be allowed to pursue potential energy efficiency financing options. Staff also recommends that APS be required to file for Commission approval any financing programs it intends to offer to customers.

14. *Peak Rewards Initiative*

Description

APS proposes to include the savings from a new residential load management initiative. The APS Peak Rewards Initiative is a pilot that uses the energy management software and grid-connected devices such as smart thermostats to help customers save energy without sacrificing comfort. APS states that the Peak Rewards Initiative operates every non-holiday weekday from May 1 to October 31. This differs from traditional demand response programs such as the APS Cool Rewards that are designed to reduce participating customers' on-peak electric usage during a limited number of days with high system peak demand.

With the Peak Rewards Initiative, participating customers select a preferred temperature setting best for them and based on the customer's preferred settings, a cloud-based energy management system adjusts their smart thermostats to precool their homes by lowering temperatures before peak hours and raising temperatures during on-peak hours. This helps customers keep comfortable while reducing energy costs and lowering APS peak energy demands.

The Peak Rewards includes homeowners and customers who live in rental properties. Property managers of rental properties would be able to use smart devices for remote customer control of HVAC system and keyless entry to assist property maintenance personnel access to vacant units. APS states that the Company will track and report energy and peak capacity savings and is not requesting any DSM funding at this time.

Staff Recommendations

Staff recommends approval of APS's proposed Peak Rewards Initiative. In addition, Staff recommends that APS include any energy and peak-capacity savings in its annual DSM Reports.

15. Tribal Communities Energy Efficiency

Description

Decision No. 77763, required APS to file, for Commission approval, a Tribal Energy Efficiency Program ("Tribal Program") to serve the Hopi and Navajo tribal communities impacted by the closure of coal-fired power plants that APS owns or operates, including Navajo Generating Station, Four Corners Power Plant, and Cholla Power Plant. Pursuant to Decision No. 77763, APS filed its proposed Tribal Program in Docket No. E-01345A-19-0088, on December 1, 2020. APS's Tribal Program was filed as a separate Program and was approved by the Commission in Decision No. 78052, dated June 24, 2021. Further details regarding the Tribal Program can be found in Docket No. E-01345A-19-0088. Pursuant to Decision No. 77763, the Tribal Program is not subject to a cost-benefit analysis. However, APS intends to track and evaluate program activities and report the impacts and cost-effectiveness of the Tribal Program.

Modifications

For 2021, APS proposed a \$500,000 budget for the Tribal Program, an increase from the \$457,000 initial budget approved in Decision No. 77763. In Decision No. 78052, the Commission approved an increase to the Tribal Program budget from \$500,000 to at least \$1,000,000 annually. In addition, the Commission required APS to "make all reasonable efforts to offer solar, storage, distributed solar and storage, and beneficial electrification measures as it implements the Tribal Communities Energy Efficiency Program" ("Expanded Tribal Program").

Staff Recommendations

Staff believes that it would be appropriate to require APS to include the Expanded Tribal Program as part of the 2022 DSM Plan.³ Due to (1) the timing of the approval of the Tribal Program; (2) the extensive expansion of the Tribal Program approved; (3) the timing of the 2021

³ At the June 8 and 9, 2021, Open Meeting, the Commission approved APS's request for an extension of time to file its 2022 DSM Plan 120 days after a Commission Decision on the 2021 DSM Plan or December 31, 2021, whichever is later.

DSM Plan being heard at Open Meeting; and (4) the extension of time the Commission granted APS to file its 2022 DSM Plan, Staff does not believe that including the Expanded Tribal Program as part of the 2021 DSM Plan review provides adequate opportunity for the Company to develop a program that would comply with the Commission's directives nor provides Staff with the time necessary to thoroughly review the Expanded Tribal Program.

Permitting APS to include the expanded Tribal Program as part of the 2022 DSM Plan would allow APS time to fully develop the Tribal Program in accordance with the Commission Decision. In addition, Staff believes that including the expanded Tribal Program as part of the 2022 DSM Plan would better allow APS an opportunity to determine the most effective way to allocate the Commission-approved budget increase. Therefore, Staff recommends that APS include the Expanded Tribal Program as part of its 2022 DSM Plan to be filed later this year. In addition, Staff recommends that APS be required to include the results of Tribal Program in its annual DSM Reports.

ENERGY SAVINGS

In 2021, APS forecasts that the 2021 DSM Plan will provide an estimated total energy savings of almost 6,789,700 Megawatt-Hour ("MWh") by the end of 2021, which represents approximately 23 percent of the Company's adjusted 2020 retail sales. Table 1 provides a breakdown of the projected energy savings.

Table 1

Source of projected Savings	Projected Savings
Residential Programs	94 MW/133,000 MWh
Non-Residential Programs	35 MW/166,000 MWh
DSM Initiatives	308 MW/35,000 MWh
Total Estimated First Year Energy Savings	334,000 MWh
Total Cumulative Savings to Date (includes credit for Pre-EE Rules savings)	6,455,690 MWh
Total Estimated Cumulative Savings by the End of 2021	6,789,690 MWh

In addition, APS is proposing an approach to recognize integrated DSM ("iDSM") technologies⁴ that provide both energy efficiency Kilowatt-Hour ("kWh") savings and flexible kW of distributed capacity value. When iDSM technologies are combined with APS time-differentiated rates, the inherent load shifting flexibility can save participants money while shifting energy usage to align with renewable energy production. APS states that the Company does not believe that the value of this load shifting capacity is being captured in current energy and demand savings metrics and therefore miss the value of daily load shifting flexibility. The potential incremental value provided by iDSM technologies (including smart thermostats and connected water heating controls) is based on the specific amount of kW that a given measure is capable of shifting off-peak each day in addition to the EE savings it delivers.

⁴ iDSM refers to integrated demand-side management technologies that offer multiple benefits including energy efficiency savings, load shifting flexibility, and demand response peak capacity all in a single technology, such as a smart thermostat.

APS provided the following calculation for determining the potential value of iDSM technologies:

$$\text{Total savings} = (\text{EE savings kWh}) + (\text{kW shifted} \times 1300 \text{ on-peak hours/year} \times 10 \text{ percent credit})$$

Example: An iDSM technology (e.g., smart thermostat) provides 300 kWh of EE savings annually and 1.0 kW of flexible daily load shifting capacity. Total savings for this DSM measure would be calculated as:

$$(300 \text{ kWh}) + (1 \text{ kW} \times 1300 \text{ hours} \times 10 \text{ percent}) = 430 \text{ kWh}$$

APS states that applying this additional savings credit to iDSM measures that can potentially deliver energy efficiency, demand response, and load shifting benefits, recognizes the additional value that these technologies deliver for customers. If this additional credit were applied to iDSM measures in 2021, APS estimates that the portfolio could achieve an additional 11,000 MWh of savings and help support greater emphasis on these beneficial technologies in future Plans. In response to a Staff Data Request ("DR"), APS has indicated that only technologies such as water heating controls and smart thermostats would qualify for iDSM technology savings as these technologies offer potential benefits of energy efficiency, demand response, and load shifting capabilities.

Staff Recommendations

Staff recommends approval of counting the potential savings from iDSM technologies towards the total savings included in the current EE Rules and the recently passed Energy Rules. In addition, Staff recommends that APS be required to include any iDSM savings in its annual DSM Reports.

DSM BUDGET AND DEMAND-SIDE MANAGEMENT ADJUSTMENT CHARGE

With the approved increase in the Tribal Program budget, the total DSM budget increases from \$63,714,480 as proposed by APS to \$64,214,480. In addition, with the increase in the total budget, the amount collected from the Demand-Side Management Adjustment Charge ("DSMAC") increases from \$38,067,283 to \$38,567,283 in 2021. The Company is proposing to use \$5,647,197 in collected but unspent funds from the DSMAC balancing account to help fund the 2021 DSM budget. Pursuant to Decision No. 76313, APS is funding a portion of the Rewards Initiative with collected, but unspent DSM funds, from the DSMAC balancing account. Table 2 shows the 2021 revenue requirement for the DSMAC.

Table 2

Updated Total APS 2021 DSM Budget⁵	\$64,214,480
Amount Recovered in Base Rates	(\$20,000,000)

⁵APS has stated in its 2021 DSM Plan that the Company is not requesting a performance incentive at this time. Includes the increase in budget for the Tribal Program as approved during the June 8 and 9, 2021, Open Meeting.

Collected and Allocated to Rewards Initiative	(\$1,479,915)*
Collected but Unspent Funds	(\$4,167,282)*
Subtotal	\$38,567,283
Gain on Sale of Assets Balance	(\$0)
Updated Total Revenue Requirement from DSMAC (assumes a 12-month collection period)	\$38,567,283

*Funds from the DSMAC Balancing Account

Table 3 compares APS's actual spending in 2020 (from the 2020 Annual DSM Report, filed on March 1, 2021), and the Company's budget for 2021.

Table 3

Program	Actual 2020 Expenses	Updated 2021 Budget
Residential		
Existing Homes	\$4,245,002	\$8,809,134
Residential New Construction	\$3,355,522	\$3,335,000
Multi-Family Energy Efficiency	\$1,139,210	\$1,565,000
Limited Income Weatherization	\$6,484,747	\$7,000,000
Conservation Behavior	\$2,077,876	\$2,108,800
Residential Energy Storage Pilot	n/a	\$1,000,000
Total Residential	\$17,302,357	\$23,817,934
Non-Residential Programs (Solutions for Business)		
Existing Facilities	\$5,435,078	\$11,169,072
New Construction and Major Renovation	\$1,209,962	\$2,148,740
Schools	\$1,073,094	\$1,994,244
Energy Information Systems	\$168,091	\$329,500
Total Non-Residential	\$7,886,225	\$15,641,556
DSM Initiatives (both Residential and Non-Residential)		
Energy Storage and Load Management (Rewards)	\$5,726,116	\$12,642,964
Building Codes and Appliance Standards	\$96,179	\$100,000
APS System Savings	\$0	\$0
EV Charging Demand Management ⁶	\$0	\$412,000
Energy and Demand Education*	\$4,496,345	\$4,050,000
Peak Rewards Initiative	n/a	\$0
Tribal Communities Energy Efficiency	n/a	\$1,000,000
Total DSM Initiatives	\$10,318,640	\$18,204,964
Demand Response		
Demand Response ⁷	\$1,947,043	\$3,544,026
Total Demand Response	\$1,947,043	\$3,544,026
Measurement, Evaluation & Research	\$3,348,877	\$3,006,000
Updated Total DSM Portfolio	\$40,803,142	\$64,214,480**

*Includes online marketplace costs.

**Includes the increase in budget for the Tribal Program as approved during the June 8 and 9, 2021, Open Meeting.

⁶Decision No. 77763 was issued on October 2, 2020. According to APS, a program implementation contractor was not selected until 2021. Therefore, there was no program spending in 2020.

⁷The spending/budget for Demand Response includes Peak Solutions non-residential demand response program, Critical Peak Pricing rate plans, and TOU rates.

Table 4 shows APS's 2021 DSM program costs by spending category.

Table 4

Program	Rebates and Incentives	Program Implementation	Program Marketing	Planning and Administration	Training/ Technical Assistance	Consumer Education	Financing	Total Program Cost
RESIDENTIAL								
Existing Homes	\$6,634,942	\$1,378,000	\$55,000	\$316,192	\$425,000	\$0	\$0	\$8,809,134
New Construction	\$2,580,000	\$440,000	\$20,000	\$275,000	\$20,000	\$0	\$0	\$3,335,000
Multi-Family EE	\$910,000	\$185,000	\$20,000	\$105,000	\$195,000	\$150,000	\$0	\$1,565,000
Limited Income Weatherization	\$6,059,000	\$305,000	\$0	\$235,000	\$51,000	\$350,000	\$0	\$7,000,000
Conservation Behavior	\$449,800	\$1,454,000	\$50,000	\$100,000	\$30,000	\$25,000	\$0	\$2,108,800
Energy Storage Pilot	\$600,000	\$256,150	\$43,850	\$100,000	\$0	\$0	\$0	\$1,000,000
Total Residential	\$17,233,742	\$4,018,150	\$188,850	\$1,131,192	\$721,000	\$525,000	\$0	\$23,817,934
NON-RESIDENTIAL								
Existing Facilities	\$6,233,072	\$2,806,000	\$450,000	\$400,000	\$1,180,000	\$100,000	\$0	\$11,169,072
New Construction/Major Renovation	\$1,198,740	\$788,000	\$20,000	\$92,000	\$50,000	\$0	\$0	\$2,148,740
Energy Information Services	\$94,000	\$205,500	\$10,000	\$5,000	\$15,000	\$0	\$0	\$329,500
Schools	\$1,044,244	\$750,000	\$30,000	\$45,000	\$90,000	\$35,000	\$0	\$1,994,244
Total Non-Residential	\$8,570,056	\$4,549,500	\$510,000	\$542,000	\$1,335,000	\$135,000	\$0	\$15,641,556
DSM INITIATIVES								
Demand Response	\$0	\$3,385,000	\$5,000	\$154,026	\$0	\$0	\$0	\$3,544,026
Rewards	\$8,075,000	\$4,317,964	\$50,000	\$200,000	\$0	\$0	\$0	\$12,642,964
Building Code & Appliance Standards	\$0	\$30,000	\$0	\$10,000	\$60,000	\$0	\$0	\$100,000
APS System Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EV Charging Demand Management	\$154,000	\$164,000	\$0	\$85,000	\$5,000	\$4,000	\$0	\$412,000
Energy & Demand Education	\$0	\$3,121,000	\$0	\$74,000	\$505,000	\$350,000	\$0	\$4,050,000
Peak Rewards	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tribal Community EE	\$690,000	\$180,000	\$130,000	\$0	\$0	\$0	\$0	\$1,000,000
Totals for DSM Initiatives	\$8,919,000	\$11,197,964	\$185,000	\$523,026	\$570,000	\$354,000	\$0	\$21,748,990
Segment Totals	\$34,377,798	\$19,675,614	\$818,850	\$2,196,218	\$2,626,000	\$1,014,000	\$0	\$61,208,480

Program Costs	\$61,208,480
Measurement, Eval & Research	\$3,006,000
Updated Total 2020 DSM Budget	\$64,214,480

The updated APS total budget is \$64,214,480 with an updated amount of \$38,567,283 to be collected through the DSMAC. The increase in the budget and DSMAC collection amount results in an increase to the current DSMAC rates from \$0.000982 per kWh and \$0.353 per kW to \$0.001374 per kWh and \$0.508 per kW for 2021. The estimated monthly bill impact for residential customers using an average of 1,064 kWh per month would be approximately \$1.46.

Staff Recommendations

Staff recommends approval of the updated total 2021 DSM Plan Budget of \$64,214,480 with \$38,567,283 to be collected through the DSMAC. In addition, Staff recommends approval of the updated DSMAC rates of \$0.001374 per kWh and \$0.508 per kW.

REQUESTS FOR WAIVERS

In response to Staff DRs, APS confirmed its desire to continue its ability to shift up to 50 percent of budgeted funds between program segments and its ability to increase or decrease incentives as previously approved by the Commission. This would allow APS to respond to market changes, customer behavior, and program needs in a more efficient manner. Funds budgeted for the Limited-Income weatherization Program and Schools Program are prohibited from being moved to other programs.

Staff Recommendations

Staff recommends that APS be allowed to continue its ability to shift up to 50 percent of budgeted funds between program segments with a 60-day notice to the Commission. In addition, Staff recommends that APS be allowed to continue its ability to increase or decrease incentives with a 60-day notice to the Commission. Staff further recommends that funds budgeted for the Limited-Income Weatherization Program, School Program, and Tribal Program are prohibited from being moved to other programs.

AMENDED 2021 DSM PLAN STAFF RECOMMENDATIONS

Below are Staff's recommendations regarding the proposed new/modified measures/programs, proposed budget, and proposed DSMAC, as discussed herein, to the APS 2021 DSM Plan.

- Staff recommends approval of the APS 2021 Amended 2021 DSM Plan as discussed herein.
- Staff recommends approval of the proposed continuation of the COVID-19 Quality Installation incentive of \$1,000 per unit for all qualifying 14 Seasonal EE Ratio ("SEER") units, and \$1,200 per unit for all qualifying equipment 15 SEER and above as part of the EHP.
- Staff recommends approval of the HVAC ducting in conditioned spaces measure as part of the Residential New Construction Program.
- Staff recommends approval of the proposed modifications to the MEEP.

- Staff recommends approval of the proposed continuation of the increased per home spending cap of \$9,000 until the end of 2021 for the Limited-Income Weatherization Program.
- Staff recommends approval of the proposed modification to offer an additional \$1,250 one-time upfront incentive to customers who agree to share a portion of their battery capacity to serve grid needs as part of the Storage Pilot.
- Staff recommends approval of the enhanced non-residential HVAC incentives due to COVID-19.
- Staff recommends approval of the ductless mini-split heat pumps as part of the EFP and NCMRP.
- Staff recommends approval of the hotel room occupancy sensors as part of the EFP and NCMRP.
- Staff recommends approval of the proposed pushback tugs as part of the EFP and NCMRP.
- Staff recommends approval of the proposed modification to the non-residential programs' delivery approach for HVAC measures.
- Staff recommends approval of APS's proposal to increase savings and participation goals for the Peak Solution non-residential demand response program.
- Staff recommends approval of the proposed System Savings projects for 2021, as discussed herein.
- Staff recommends approval of the proposed one-time incentive of \$250 for residential Level 2 EV charging stations for the EV Pilot.
- Staff recommends approval of APS's proposed Peak Rewards Initiative as discussed herein.
- Staff recommends that APS include any energy and peak-capacity savings from the Peak Rewards initiative in its annual DSM Reports.
- Staff recommends that APS be permitted to include the Expanded Tribal Program as part of the 2022 DSM Plan.
- Staff recommends that APS include the results of Expanded Tribal Program in its annual DSM Reports.

THE COMMISSION

June 29, 2021

Page 21

- Staff recommends that APS be permitted to include savings from iDSM technologies when calculating its savings goals in this current 2021 DSM Plan and future DSM Plans until further Order of the Commission.
- Staff recommends that APS be required to include any savings results from iDSM technologies in its annual DSM Reports.
- Staff recommends approval of the APS 2021 DSM Plan updated total budget of \$64,214,480 as discussed herein.
- Staff recommends approval of the APS 2021 DSM Plan updated total DSMAC collection amount of \$38,567,283 as discussed herein.
- Staff recommends approval of the updated DSMAC of \$0.001374 per kWh and \$0.508 per kW as discussed herein.
- Staff recommends that APS be allowed to continue its ability to shift up to 50 percent of budgeted funds between program segments with a 60-day notice to the Commission.
- Staff recommends that APS be allowed to continue its ability to increase or decrease incentives with a 60-day notice to the Commission, with the exception of the Limited-Income Weatherization Program, the Schools Program, and the Tribal Program.
- Staff recommends that the 2021 DSM Plan total budget, DSMAC collection amount, and surcharges approved herein remain in effect until further Order of the Commission.

Ranelle Spaladino

for

Elijah O. Abinah
Director
Utilities Division

EOA:CLA:ihf/MAS

ORIGINATOR: Candrea Allen

THE COMMISSION

June 29, 2021

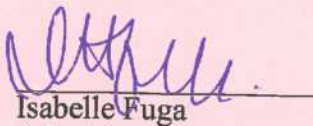
Page 22

On this 29th day of June, 2021, the foregoing document was filed with Docket Control as a Utilities Division Memorandum & Proposed Order, and copies of the foregoing were mailed on behalf of the Utilities Division to the following who have not consented to email service. On this date or as soon as possible thereafter, the Commission's eDocket program will automatically email a link to the foregoing to the following who have consented to email service.

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By:



Isabelle Fuga
Administrative Support Specialist

1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2 LEA MÁRQUEZ PETERSON
Chairwoman

3 SANDRA D. KENNEDY
Commissioner

4 JUSTIN OLSON
Commissioner

5 ANNA TOVAR
Commissioner

6 JIM O'CONNOR
Commissioner

7
8 IN THE MATTER OF THE APPLICATION
9 OF ARIZONA PUBLIC SERVICE
10 COMPANY FOR A RULING RELATING TO
11 ITS 2021 DEMAND SIDE MANAGEMENT
12 IMPLEMENTATION PLAN.

DOCKET NO. E-01345A-20-0151

DECISION NO. _____

ORDER

APPLICATION FOR APPROVAL OF
AMENDED 2021 DEMAND SIDE
MANAGEMENT IMPLEMENTATION
PLAN.

13 Open Meeting
14 July 13 and 14, 2021
15 Phoenix, Arizona

16 BY THE COMMISSION:

17 FINDINGS OF FACT

18 1. Arizona Public Service Company ("APS" or "Company") is certificated to provide
19 electric service within portions of Arizona, pursuant to authority granted by the Arizona Corporation
20 Commission ("Commission").

21 **BACKGROUND**

22 2. On December 31, 2020, APS filed with the Commission an application for approval
23 of its 2021 Demand Side Management ("DSM") Implementation Plan ("2021 DSM Plan" or
24 "Original Plan") pursuant to the Energy Efficiency Standard ("EE Rules") set forth in Arizona
25 Administrative Code ("A.A.C.") R14-2401 through R14-2419. On April 6, 2021, APS filed an
26 Amended 2021 DSM Implementation Plan ("Amended 2021 DSM Plan") for Commission review
27 and approval. The Amended 2021 DSM Plan replaces the Original Plan in its entirety.

28 ...

AMENDED 2021 DSM PLAN

3. The APS Amended 2021 DSM Plan proposes to continue the current Commission-approved DSM portfolio of measures or programs targeted to multiple customer segments that were approved in the 2020 DSM Plan. APS states that the Company intends to continue the current incentive levels approved in the 2020 DSM Plan unless otherwise specified herein. The Amended 2021 DSM Plan also proposes to continue to offer its approved measures or programs designed specifically to assist customers who have been impacted by COVID-19.

4. The focus of the Commission Utilities Division Staff's ("Staff") review is on new, modified, and/or expanded measures and programs proposed in APS's Amended 2021 DSM Plan. Therefore, Staff did not conduct cost-benefit analyses for measures or programs previously approved by the Commission. For measures or programs in which Staff conducted a cost-benefit analysis, Staff performed its analysis in accordance with A.A.C. R14-2-2412(B), which requires that the Societal Test be used for determining cost-effectiveness of DSM measures or programs. Under the Societal Test, for a program or measure to be considered cost-effective, the ratio of benefits to costs must be greater than one. Staff used this method to determine if a program or measure is cost-effective and, as such, based its recommendations on the results of the Societal Test.

5. The table below shows the current Commission-approved programs included in APS's DSM Portfolio:

Residential Programs	
Existing Homes Program	
Residential New Construction	
Multi-Family Energy Efficiency	
Limited Income Weatherization	
Conservation Behavior**	
Residential Energy Storage Pilot*	
Non-Residential Programs (Solutions for Business)	
Existing Facilities	
New Construction and Major Renovation	
Schools	
Energy Information Services	
DSM Initiatives (both Residential and Non-Residential)	
Demand Response Programs	
Energy Storage and Load Management Initiative (Rewards)**	
Building Codes and Appliance Standards Initiative**	
APS System Savings	
EV Charging Demand Management	
Energy and Demand Education	

Peak Rewards Initiative
Tribal Communities Energy Efficiency

*Approved as part of APS's 2020 Renewable Energy Standard Implementation Plan (Decision No. 77762)

**APS is not proposing any modifications to these programs. Therefore, Staff did not include discussion of these programs in its report.

A. Residential Programs

1. Existing Homes Program

Description

6. The Existing Homes Program ("EHP") combines LED lighting, energy efficient smart thermostats, energy efficient Heating, Ventilation, and Air Conditioning ("HVAC") equipment, and Home Performance with ENERGY STAR® offerings into one comprehensive program. The program encourages residential customers to purchase energy efficient products, the proper installation of energy efficient HVAC equipment, and promotes a whole house approach to energy efficiency. The current EHP structure was approved in Decision No. 77763.

Modifications

7. To help customers who have been impacted by COVID-19, APS is proposing to continue the increased funding for the higher incentives and modified program requirements for qualifying emergency HVAC replacements approved in Decision No. 77763. The COVID-19 Quality Installation incentive will continue at \$1,000 per unit for all qualifying 14 Seasonal EE Ratio ("SEER") units, and \$1,200 per unit for all qualifying equipment 15 SEER and above.

8. In addition, APS is proposing to extend the installation period from the end of 2020 to October 15, 2021, the end of the 2021 summer moratorium period for disconnections due to non-payment. To qualify for the increased incentive, customers must meet the following requirements:

- The HVAC unit must be an emergency replacement of existing HVAC equipment that has failed or is failing. The incentive does not apply to early replacement of working equipment, or to new HVAC units that are not replacing existing equipment.
- Customers must self-attest that they have become unemployed due to COVID-19 and will be required to sign a form that confirms they meet the program requirements.
- HVAC units may be replaced until funding is no longer available or until the Commission approves a discontinuation of the additional COVID-19 funding.

...

...

9. Customers who do not meet the requirements to receive the increased incentives may still qualify to receive the \$200 Quality Installation incentive if they meet all other current program requirements. APS is not proposing any other modifications to the EHP.

Staff Recommendations

10. Staff recommends approval of the proposed continuation of the COVID-19 Quality Installation incentive of \$1,000 per unit for all qualifying 14 SEER units, and \$1,200 per unit for all qualifying equipment 15 SEER and above as part of the Existing Homes Program. The expanded incentive levels do not impact cost-effectiveness. In addition, Staff believes that it is appropriate to continue the enhanced program offerings related to COVID-19.

2. Residential New Construction Program

Description

11. The Residential New Construction Program promotes high-efficiency construction practices for new homes. The program offers incentives to builders that meet the energy efficiency requirements of the program. The program is based on the Environmental Protection Agency's ("EPA") ENERGY STAR® version 3 new homes certification and includes additional energy efficiency requirements. The program also includes builder incentives to install connected electric water heater and Electric Vehicle ("EV") ready pre-wiring. EV ready pre-wiring accommodates future installation of EV charging stations. The current Residential New Construction Program structure was approved in Decision No. 77763.

Modifications

12. APS is proposing a new energy efficiency measure that would offer \$200 per home for participating homebuilders who install HVAC ducting in conditioned spaces. A conditioned space is one that uses some form of HVAC for heating and/or cooling (living areas) versus an unconditioned space which is one that does not typically utilize any HVAC for heating and/or cooling (attics or garages). APS states that HVAC installation in conditioned spaces can result in approximately 10 percent annual HVAC savings each year over the life of the home.

13. Traditional ducting can leak into unconditioned spaces which results in heating and cooling waste and also leads to air infiltration and pressure imbalances that can pull unhealthy attic

1 air into living spaces. APS states that ductwork installed in conditioned spaces can save energy,
2 improve indoor air quality and comfort, and provide cost-effective saving.

3 14. This new measure would be promoted as a prescriptive measure. Participating
4 builders can qualify for the \$200 incentive in addition to the ENERGY STAR® homes incentive.
5 However, the energy savings from this measure cannot be included as part of the ENERGY STAR®
6 qualification using the Home Energy Rating System (“HERS”) score performance path.

7 Staff Recommendations

8 15. Staff found the HVAC ducting in conditioned spaces to be cost-effective with a ratio
9 of 1.20. Therefore, Staff recommends approval of the HVAC ducting in conditioned spaces measure
10 as described herein.

11 3. *Multi-Family Energy Efficiency Program*

12 Description

13 16. The Multi-Family Energy Efficiency Program (“MEEP”) encourages efficiency
14 improvements of multi-family properties and dormitories by using a two-track approach intended to
15 target existing and new construction multi-family buildings. Track one targets existing multi-family
16 properties providing direct-install retrofit measures at no cost to the existing multi-family
17 community. However, the direct-install measures must be installed by facility personnel. In
18 addition, this track offers energy assessments to help identify additional energy savings opportunities
19 and available APS rebates within the multi-family complex but outside of the individual dwelling
20 units (such as common area buildings, swimming pools, outdoor lighting, and laundries). Track two
21 is for new construction/major renovations that offers a per-dwelling incentive for projects that build
22 or renovate to a higher level of efficiency. Incentives increase as a higher level of efficiency is
23 achieved. The current MEEP structure was approved in Decision No. 77763.

24 Modifications

25 17. APS is proposing to integrate the implementation of the MEEP utilizing the same
26 implementation contractor who delivers the Solutions for Business program. APS states that this
27 will help streamline program delivery, reduce overhead costs, and facilitate more comprehensive
28 multi-family projects including efficiency upgrades in common areas served by non-residential

1 meters in addition to individual residential units. Beginning with its 2021 DSM Annual Progress
2 Report, APS intends to consolidate reporting of all savings achieved in multi-family properties
3 within the MEEP (both residential rental units and non-residential common areas).

4 Staff Recommendations

5 18. Staff recommends approval of the proposed modifications to the MEEP as these
6 modifications would improve the cost-effectiveness of measures that have already been found to be
7 cost effective.

8 4. *Limited Income Weatherization Program*

9 Description

10 19. The Limited Income Weatherization Program ("LIWP") provides support to
11 residential customers who have the most difficulty affording their energy costs. The LIWP is
12 designed to improve the energy efficiency, safety, and health attributes of homes occupied by
13 customers whose income falls within 200 percent of the federal poverty level. The weatherization
14 component offers various home improvement measures including cooling system repair and
15 replacement, insulation, sunscreens, water heaters, window repairs and improvements, and other
16 general household repairs. The LIWP is administered by various community action agencies
17 throughout APS's service territories. The current LIWP structure was approved in Decision No.
18 77763.

19 Modifications

20 20. In Decision No. 77763, APS was approved for an increase in the per home spending
21 cap from \$6,000 to \$9,000. The increase in the per home spending cap was to end December 31,
22 2020. However, APS is proposing to continue the increased per home spending cap of \$9,000 until
23 the end of 2021. APS states that the increased per home spending cap allows for larger energy
24 efficiency projects, including emergency HVAC replacement and related repairs in cases where
25 additional assistance dollars may not be available.

26 . . .

27 . . .

28 . . .

Staff Recommendations

21. Staff recommends approval of the proposed continuation of the increased per home spending cap of \$9,000 until the end of 2021, for the LIWP as this modification does not impact cost-effectiveness.

*5. Residential Energy Storage Pilot*Description

22. Decision No. 77762 (dated October 2, 2020), approved the Residential Energy Storage Pilot ("Storage Pilot") which was included in APS's 2020 Renewable Energy Standard and Tariff ("REST") Implementation Plan ("REST Plan"). In that Decision, the Commission ordered that the Storage Pilot be included in its 2021 DSM Plan to address the program budget. The Commission-approved Storage Pilot offers customers a one-time incentive of \$500/Kilowatt ("kW"), with a cap of \$2,500/home to customers who install residential battery systems and enroll in a Time-of-Use ("TOU") or TOU plus demand rate plan. In addition, customers must commit to discharging their batteries during on-peak periods.

23. Customers who are adding batteries to existing solar systems who are grandfathered net metering customers are entitled to retain their grandfathered status and current rate plan. Those customers with a Resource Comparison Proxy ("RCP") rate are entitled to retain their current RCP rate. Customers who participate in the Storage Pilot also agree to connect their batteries to the APS resource operating platform and share battery information. Further, Decision No. 77762, as amended by Decision Nos. 77855 and 77958, requires APS to develop and file a Distributed Demand-Side Aggregation Tariff ("DDSR Aggregation Tariff") which "[permits] the aggregation of distributed energy storage systems that provides compensation for the value each system provides, including, but not limited to compensation for capacity, demand reduction, load shifting, locational value, voltage support, ancillary and grid services, and any other operating characteristic the Commission may deem appropriate."

Modifications

24. APS is proposing to offer an additional \$1,250 one-time upfront incentive to customers who agree to share a portion of their battery capacity to serve grid needs. Customers

1 would receive the additional incentive for a three-year commitment to share up to 80 percent of their
2 storage system's capacity for a maximum of 100 events per year. APS states that this option would
3 help inform the DDSR Aggregation Tariff currently in development pursuant to Decision No. 77762,
4 and will provide valuable data on DDSR technology performance.

5 Staff Recommendations

6 25. Staff recommends approval of the proposed modification to offer an additional
7 \$1,250 one-time upfront incentive to customers who agree to share a portion of their battery capacity
8 to serve grid needs as part of the Storage Pilot as this modification does not impact cost-
9 effectiveness.

10 **B. Non-Residential Programs (Solutions for Business)**

11 6. *Existing Facilities Program*

12 Description

13 26. The Existing Facilities Program ("EFP") provides prescriptive incentives to owners
14 and operators of non-residential facilities for DSM improvements in lighting, HVAC, motors,
15 building envelope, and refrigeration measures. In addition, the EFP offers incentives for pilot
16 electrification measures including forklifts, airport vehicles, and standby truck refrigeration.
17 Further, the EFP also offers custom incentives that are evaluated individually based on energy
18 savings.

19 7. *New Construction and Major Renovation Program*

20 Description

21 27. The New Construction and Major Renovation ("NCMR") Program includes three
22 components: (1) design assistance; (2) prescriptive measures; and (3) custom efficiency measures.
23 Design assistance involves integration of energy efficiency into a customer's design process to
24 influence equipment/systems selection specification as early in the process as possible. Prescriptive
25 and custom measures such as lighting, HVAC, motors, building envelope, and refrigeration
26 measures. In addition, the New Construction custom efficiency measures component includes
27 Whole Building Design which encourages customers, developers, and design professionals to
28

1 design, and build, and invest in higher performing buildings through a tiered performance incentive
2 structure. Incentives increase as the building performance improves.

3 8. *Schools Program*

4 Description

5 28. The Schools Program sets aside funding for K-12 school buildings (public, private,
6 and charter). The DSM measures and incentives available for schools are the same that are available
7 for all non-residential programs including lighting and refrigeration. Once schools fully subscribe
8 to the Schools Program, or once a school reaches the cap of \$100,000 per year, schools can
9 participate in other non-residential programs. Incentive levels are the same as the Existing Facilities
10 (for existing school facilities) and New Construction (for new school construction and major
11 renovations). APS also offers the same DSM measures in the Schools Program to qualifying non-
12 profit community organizations.

13 9. *Energy Information Services Program*

14 Description

15 29. The Energy Information Services Program (“EIS”) helps customers with greater than
16 100 kW demand save energy through better understanding and control over the facilities’ energy
17 use. The EIS Program provides segmented 15-minute interval electric usage data to large non-
18 residential customers using a web-based energy informational tool. The tool provides information
19 that can be used to help improve or monitor energy usage patterns, reduce energy use, reduce demand
20 during on-peak periods, and better manage overall energy operations.

21 Modifications for Non-Residential Programs

22 30. APS’s proposed modifications would apply to more than one non-residential
23 program. Therefore, the Modifications and Staff Recommendations sections were not separately
24 included for each non-residential program.

25 31. **Enhanced Incentives Due to COVID-19** – Decision No. 77763, approved an
26 increased incentive for non-residential customers replacing qualified HVAC equipment (maximum
27 size of 40 tons), up to 75 percent of incremental costs with a maximum cap of \$10,000 per unit. In
28 addition, APS is proposing to extend the installation period from the end of 2020 to October 15,

2021, the end of the 2021 summer moratorium period for disconnections due to non-payment. To qualify for the increased incentive, customers must meet the following requirements:

- The HVAC unit must be an emergency replacement of existing HVAC equipment that has failed or is failing. The incentive does not apply to early replacement of working equipment, or to new HVAC units that are not replacing existing equipment.
- HVAC units may be replaced until funding is no longer available or until the Commission approves a discontinuation of the additional COVID-19 funding.
- Customers must meet all other current program requirements.

32. Customers who do not meet the conditions above may still receive the standard program incentives if they meet all other current program requirements.

33. **New Prescriptive Energy Efficiency Measures** – APS is proposing two new prescriptive energy efficiency measures (1) ductless mini-split heat pumps and (2) hotel room occupancy sensors. The ductless mini-split heat pumps will be offered as part of the EFP and the hotel room occupancy sensors will be offered as part of both the EFP and the NCMR Program.

- Ductless mini-split heat pumps are an alternative to conventional HVAC systems that rely on ducts to distribute air throughout a space. Ductless mini-split heat pumps may be a good option for small spaces or when extending existing duct work or installing duct work is not feasible¹. According to APS, because ductless mini-split heat pumps are available up to 25 SEER efficiency level, they are a more efficient alternative for cooling and heating compared to window or in-room AC units and electric resistance heating. APS is proposing to offer an incentive of up to \$10 per kilo-British Thermal Unit (“kBTU”)/hour for the installation of new ductless mini-split heat pumps in qualifying facilities.
- Hotel room occupancy sensors detect indoor activity within a certain area. The sensors can save energy by turning lights off soon after an occupant has left the room. APS states that the sensors can use different technology options, such as motion detection, thermal occupancy sensors, and network presence sensing, to determine if a hotel room is occupied. If a room is unoccupied, the sensors can be used to automatically adjust thermostat temperatures, shut off lighting, and turn off other in-room electronics such as televisions. In addition, the sensors can be included as part of a whole hotel-wide energy management system to further reduce energy waste and curtail peak demand. APS is proposing to offer an incentive of up to \$50 per unit for the installation of new hotel occupancy sensors.

¹ <https://www.energy.gov/energysaver/heat-pump-systems/ductless-mini-split-heat-pumps>

1 34. **Pushback Tugs** – APS is reintroducing this Electrification Pilot Measure. Pushback
2 tugs were proposed by APS in its 2020 DSM Plan. However, Staff did not find the measure to be
3 cost-effective at that time. APS states that the Company discovered that inaccurate incremental
4 costs were used in the calculations included in the 2020 DSM Plan that resulted in the measure not
5 being cost-effective. Pushback tugs would be offered through the EFP and NCMR Program

6 35. Pushback tugs are specialized vehicles that carry out the pushback procedure in
7 which an aircraft is pushed backwards away from its parking position, typically an airport gate².
8 APS states that, currently, pushback tugs are typically operated using gasoline-powered internal
9 combustion engines and shifting to electricity can reduce energy costs, improve energy efficiency,
10 lower emissions, and create a safer, healthier, and quieter work environment. APS is proposing to
11 offer an average incentive of approximately \$5,000 per unit.

12 36. **Modify Non-Residential Programs' Delivery Approach for HVAC Measures** –
13 APS is proposing to transition non-residential programs to a midstream incentive program design
14 by 2022 to achieve more cost-effective, large-scale savings. A midstream program design focuses
15 on engaging distributors to accelerate the introduction and sale of more efficient products to a
16 broader customer base when offered as a component of traditional Commercial and Industrial
17 (“CAI”) programs. With this model, distributors provide a point-of-sale discount to contractors who
18 purchase qualifying EE equipment. The distributor then submits required measure and sale
19 documentation that is then validated by a third-party administrator. The third-party administrator
20 reimburses the distributor for providing the rebate to contractors.

21 37. APS states that a broader range of contractors and customers are more likely to take
22 advantage of EE incentives when the incentives are provided at the register without requiring the
23 contractors or customers to submit paperwork in order to receive those incentives. In addition, APS
24 states that the midstream model allows distributors to modify their business model to allow them to
25 control the application of incentives instead of relying on contractors' willingness to submit program
26 applications. As a result, the distributor has the ability to stock more efficient equipment with the

27
28 ² <https://en.wikipedia.org/wiki/pushback>

1 greater chance of selling the equipment. APS would identify which measures would be most
2 appropriate for transitioning to the midstream approach and intends to prioritize HVAC-related
3 measures which would help broaden the reach of HVAC savings and help manage load shape and
4 control peak demand.

5 38. APS intends to begin transitioning to the midstream model during 2021 in order to
6 designate qualifying measures, establish implementation processes, create marketing and
7 communications materials, and recruit and train distributors on educating contractors and customers
8 about savings opportunities and eligibility and documentation requirements. All qualified
9 commercial or industrial customers would be eligible to participate. Further, participating
10 distributors must have a direct agreement with the manufacturer, and purchasers cannot be retailers.
11 The purchaser, typically a contractor, must be involved in the installation of the EE measure.
12 However, customers who self-install would be allowed to benefit from the program, if purchasing
13 directly from a participating distributor. Contractors or potentially customers may also purchase
14 directly from a manufacturer in some cases, subject to APS approval.

15 Staff Recommendations for Non-Residential Programs

16 39. Staff recommends approval of the proposed enhanced HVAC incentives due to
17 COVID-19 as this modification does not impact cost-effectiveness.

18 40. Staff found the ductless mini-split heat pumps to be cost-effective with a ratio of 2.25.
19 Therefore, Staff recommends approval of the proposed ductless mini-split heat pumps.

20 41. Staff found the hotel occupancy sensors to be cost-effective with a ratio of 1.10.
21 Therefore, Staff recommends approval of the proposed hotel room occupancy sensors.

22 42. Staff found the pushback tugs to be cost-effective with a ratio of 4.46. Therefore,
23 Staff recommends approval of the proposed pushback tugs.

24 43. Staff recommends approval of the proposed modification to the Non-Residential
25 Program's delivery approach for HVAC measures, as the proposed process would improve the cost-
26 effectiveness of HVAC measures that have already been found to be cost-effective.

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1 **C. Demand-Side Management Initiatives**

2 *10. Demand Response Programs*

3 Description

4 44. APS's Demand Response Programs include the Peak Solutions non-residential
5 demand response program, Critical Peak Pricing rate plans, and TOU rates.

6 Modifications

7 45. APS is proposing to increase the savings and participation goals for the Peak
8 Solutions non-residential demand response program.

9 Staff Recommendations

10 46. Staff recommends approval of APS's proposal to increase savings and participation
11 goals for the Peak Solution non-residential demand response program as this modification does not
12 impact cost-effectiveness.

13 *11. APS System Savings-2021 Projects*

14 Description

15 47. APS system savings projects include, but are not limited to, APS generation,
16 transmission, distribution, and facilities energy efficiency improvements. APS system savings
17 projects also include many of the same energy saving measures installed at customer facilities but
18 are implemented at APS facilities.

19 Modifications

20 48. APS is proposing the following System Savings Projects for 2021:

- 21 • Operation of Conservation Voltage Reduction systems on an estimated 14
22 distribution feeders throughout the APS service territory.
- 23 • EE upgrades to APS facilities including installation of new Energy Management
24 System controls, new higher efficiency HVAC air handlers, package HVAC unit
25 replacements, and variable frequency drives. These measures have previously been
26 approved as part of the Solutions for Business Program. APS intends to count an
estimated 6,000 Megawatt-hour ("MWh") of annual energy savings from System
Savings projects in 2021.

27 Staff Recommendations

28 49. Staff recommends approval of the proposed System Savings projects for 2021.

12. *EV Charging Demand Management Pilot*

Description

50. Decision No. 77763, approved the EV Charging Demand Management Pilot ("EV Pilot"). This Pilot works with vehicle fleets, charging station infrastructure, and individual EV owners to gather data on EV charging behavior and to encourage off-peak charging to manage peak demand. The EV Pilot targets all EV owners within APS's service territory and includes the following elements:

- EV Charging Baseline Data: Installation of data collection devices in participating EVs to track and record their charging activity and provide baseline data on current EV charging behavior.
- Beneficial Charging Behavior: After establishing a baseline charging behavior, the program may then launch a rewards program for EV owners that would offer reward points in exchange for charging during off-peak hours.
- EV Charging Station Direct Load Control: Will work with EV charging station providers to connect EV charging stations into the APS Rewards distributed energy resource operating platform.

Modifications

51. APS is proposing to offer a one-time incentive of \$250 for a limited number of smart Wi-Fi connected residential Level 2 EV charging stations that can be connected to provide telemetry data on home charging behavior as well as participate in load shifting and demand response events. This incentive would be in addition to the current \$85 per year incentive offered to customers who agree to provide APS with their vehicle charging data.

Staff Recommendations

52. Staff recommends approval of the proposed \$250 incentive for residential Level 2 EV charging stations for the EV Pilot as this modification does not impact cost-effectiveness.

13. *Energy and Demand Education*

Description

53. Approved in Decision No. 76313, the Energy and Demand Education Program ("ED Program") provides customers with energy and demand management education tools such as web-based energy and demand analyzers, personalized outreach, and social media. These tools and

resources help provide customers with enhanced information about their usage to better manage energy use and demand. The ED Program allows APS to offer an online marketplace that educates customers and helps them to purchase the most energy efficiency appliances, get instant rebates from APS, and links them to APS programs and energy services.

54. Due to COVID-19, APS offers a free “virtual checkup” home energy auditing service. APS states that the “virtual checkup” provides similar benefits to an in-person audit by using the mobile app which allows the customer to use the video feature on a phone or tablet. An experienced energy auditor observes the video remotely, while asking questions about the property and makes recommendations for energy-saving improvements. APS intends to pursue potential energy efficiency financing options to help customers better afford the upfront costs of upgrades and improvements, either through the APS marketplace or with other potential providers.

Staff Recommendations

55. Staff recommends that APS be allowed to pursue potential energy efficiency financing options. Staff also recommends that APS be required to file for Commission approval any financing programs it intends to offer to customers.

14. Peak Rewards Initiative

Description

56. APS proposes to include the savings from a new residential load management initiative. The APS Peak Rewards Initiative is a pilot that uses the energy management software and grid-connected devices such as smart thermostats to help customers save energy without sacrificing comfort. APS states that the Peak Rewards Initiative operates every non-holiday weekday from May 1 to October 31. This differs from traditional demand response programs such as the APS Cool Rewards that are designed to reduce participating customers’ on-peak electric usage during a limited number of days with high system peak demand.

57. With the Peak Rewards Initiative, participating customers select a preferred temperature setting best for them and based on the customer’s preferred settings, a cloud-based energy management system adjusts their smart thermostats to precool their homes by lowering

58. temperatures before peak hours and raising temperatures during on-peak hours. This helps customers keep comfortable while reducing energy costs and lowering APS peak energy demands.

59. The Peak Rewards includes homeowners and customers who live in rental properties. Property managers of rental properties would be able to use smart devices for remote customer control of HVAC system and keyless entry to assist property maintenance personnel access to vacant units. APS states that the Company will track and report energy and peak capacity savings and is not requesting any DSM funding at this time.

Staff Recommendations

60. Staff recommends approval of APS's proposed Peak Rewards Initiative. In addition, Staff recommends that APS include any energy and peak-capacity savings in its annual DSM Reports.

15. Tribal Communities Energy Efficiency

Description

61. Decision No. 77763, required APS to file, for Commission approval, a Tribal Energy Efficiency Program ("Tribal Program") to serve the Hopi and Navajo tribal communities impacted by the closure of coal-fired power plants that APS owns or operates, including Navajo Generating Station, Four Corners Power Plant, and Cholla Power Plant. Pursuant to Decision No. 77763, APS filed its proposed Tribal Program in Docket No. E-01345A-19-0088, on December 1, 2020. APS's Tribal Program was filed as a separate Program and was approved by the Commission in Decision No. 78052, dated June 24, 2021. Further details regarding the Tribal Program can be found in Docket No. E-01345A-19-0088. Pursuant to Decision No. 77763, the Tribal Program is not subject to a cost-benefit analysis. However, APS intends to track and evaluate program activities and report the impacts and cost-effectiveness of the Tribal Program.

Modifications

62. For 2021, APS proposed a \$500,000 budget for the Tribal Program, an increase from the \$457,000 initial budget approved in Decision No. 77763. In Decision No. 78052, the Commission approved an increase to the Tribal Program budget from \$500,000 to at least

1 \$1,000,000 annually. In addition, the Commission required APS to “make all reasonable efforts to
2 offer solar, storage, distributed solar and storage, and beneficial electrification measures as it
3 implements the Tribal Communities Energy Efficiency Program” (“Expanded Tribal Program”).

4 Staff Recommendations

5 63. Staff believes that it would be appropriate to require APS to include the Expanded
6 Tribal Program as part of the 2022 DSM Plan³. Due to (1) the timing of the approval of the Tribal
7 Program; (2) the extensive expansion of the Tribal Program approved; (3) the timing of the 2021
8 DSM Plan being heard at Open Meeting; and (4) the extension of time the Commission granted APS
9 to file its 2022 DSM Plan, Staff does not believe that including the Expanded Tribal Program as part
10 of the 2021 DSM Plan review provides adequate opportunity for the Company to develop a program
11 that would comply with the Commission’s directives nor provides Staff with the time necessary to
12 thoroughly review the Expanded Tribal Program..

13 64. Permitting APS to include the expanded Tribal Program as part of the 2022 DSM
14 Plan would allow APS time to fully develop the Tribal Program in accordance with the Commission
15 Decision. In addition, Staff believes that including the expanded Tribal Program as part of the 2022
16 DSM Plan would better allow APS an opportunity to determine the most effective way to allocate
17 the Commission-approved budget increase. Therefore, Staff recommends that APS include the
18 Expanded Tribal Program as part of its 2022 DSM Plan to be filed later this year. In addition, Staff
19 recommends that APS be required to include the results of Tribal Program in its annual DSM
20 Reports.

21 **ENERGY SAVINGS**

22 65. In 2021, APS forecasts that the 2021 DSM Plan will provide an estimated total energy
23 savings of almost 6,789,700 Megawatt-Hour (“MWh”) by the end of 2021, which represents
24 approximately 23 percent of the Company’s adjusted 2020 retail sales. Table 1 provides a
25 breakdown of the projected energy savings.

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28 ³ At the June 8 and 9, 2021, Open Meeting, the Commission approved APS’s request for an extension of time to file its 2022 DSM Plan 120 days after a Commission Decision on the 2021 DSM Plan or December 31, 2021, whichever is later.

Table 1

Source of projected Savings	Projected Savings
Residential Programs	94 MW/133,000 MWh
Non-Residential Programs	35 MW/166,000 MWh
DSM Initiatives	308 MW/35,000 MWh
Total Estimated First Year Energy Savings	334,000 MWh
Total Cumulative Savings to Date (includes credit for Pre-EE Rules savings)	6,455,690 MWh
Total Estimated Cumulative Savings by the End of 2021	6,789,690 MWh

66. In addition, APS is proposing an approach to recognize integrated DSM (“iDSM”) technologies⁴ that provide both energy efficiency Kilowatt-Hour (“kWh”) savings and flexible kW of distributed capacity value. When iDSM technologies are combined with APS time-differentiated rates, the inherent load shifting flexibility can save participants money while shifting energy usage to align with renewable energy production. APS states that the Company does not believe that the value of this load shifting capacity is being captured in current energy and demand savings metrics and therefore miss the value of daily load shifting flexibility. The potential incremental value provided by iDSM technologies (including smart thermostats and connected water heating controls) is based on the specific amount of kW that a given measure is capable of shifting off-peak each day in addition to the EE savings it delivers.

67. APS provided the following calculation for determining the potential value of iDSM technologies:

$$\text{Total savings} = (\text{EE savings kWh}) + (\text{kW shifted} \times 1300 \text{ on-peak} \\ \text{hours/year} \times 10 \text{ percent credit})$$

68. Example: An iDSM technology (e.g., smart thermostat) provides 300 kWh of EE savings annually and 1.0 kW of flexible daily load shifting capacity. Total savings for this DSM measure would be calculated as:

$$(300 \text{ kWh}) + (1 \text{ kW} \times 1300 \text{ hours} \times 10 \text{ percent}) = 430 \text{ kWh}$$

69. APS states that applying this additional savings credit to iDSM measures that can potentially deliver energy efficiency, demand response, and load shifting benefits, recognizes the

⁴ APS has stated in its 2021 DSM Plan that the Company is not requesting a performance incentive at this time. Includes in budget for the Tribal Program as approved during the June 8 and 9, 2021, Open Meeting.

1 additional value that these technologies deliver for customers. If this additional credit were applied
2 to iDSM measures in 2021, APS estimates that the portfolio could achieve an additional 11,000
3 MWhs of savings and help support greater emphasis on these beneficial technologies in future Plans.
4 In response to a Staff Data Request (“DR”), APS has indicated that only technologies such as water
5 heating controls and smart thermostats would qualify for iDSM technology savings as these
6 technologies offer potential benefits of energy efficiency, demand response, and load shifting
7 capabilities.

8 Staff Recommendations

9 70. Staff recommends approval of counting the potential savings from iDSM
10 technologies towards the total savings included in the current EE Rules and the recently passed
11 Energy Rules. In addition, Staff recommends that APS be required to include any iDSM savings in
12 its annual DSM Reports.

13 **DSM BUDGET AND DEMAND-SIDE MANAGEMENT ADJUSTMENT CHARGE**

14 71. With the approved increase in the Tribal Program budget, the total DSM budget
15 increases from \$63,714,480 as proposed by APS to \$64,214,480. In addition, with the increase in
16 the total budget, the amount collected from the Demand-Side Management Adjustment Charge
17 (“DSMAC”) increases from \$38,067,283 to \$38,567,283 in 2021. The Company is proposing to use
18 \$5,647,197 in collected but unspent funds from the DSMAC balancing account to help fund the
19 2021 DSM budget. Pursuant to Decision No. 76313, APS is funding a portion of the Rewards
20 Initiative with collected, but unspent DSM funds, from the DSMAC balancing account. Table 2
21 shows the 2021 revenue requirement for the DSMAC.

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Table 2

Updated Total APS 2021 DSM Budget⁵	\$64,214,480
Amount Recovered in Base Rates	(\$20,000,000)
Collected and Allocated to Rewards Initiative	(\$1,479,915)*
Collected but Unspent Funds	(\$4,167,282)*
Subtotal	\$38,567,283
Gain on Sale of Assets Balance	(\$0)
Updated Total Revenue Requirement from DSMAC (assumes a 12-month collection period)	\$38,567,283

*Funds from the DSMAC Balancing Account

72. Table 3 compares APS's actual spending in 2020 (from the 2020 Annual DSM Report, filed on March 1, 2021), and the Company's budget for 2021.

Table 3

Program	Actual 2020 Expenses	Updated 2021 Budget
Residential		
Existing Homes	\$4,245,002	\$8,809,134
Residential New Construction	\$3,355,522	\$3,335,000
Multi-Family Energy Efficiency	\$1,139,210	\$1,565,000
Limited Income Weatherization	\$6,484,747	\$7,000,000
Conservation Behavior	\$2,077,876	\$2,108,800
Residential Energy Storage Pilot	n/a	\$1,000,000
Total Residential	\$17,302,357	\$23,817,934
Non-Residential Programs (Solutions for Business)		
Existing Facilities	\$5,435,078	\$11,169,072
New Construction and Major Renovation	\$1,209,962	\$2,148,740
Schools	\$1,073,094	\$1,994,244
Energy Information Systems	\$168,091	\$329,500
Total Non-Residential	\$7,886,225	\$15,641,556
DSM Initiatives (both Residential and Non-Residential)		
Energy Storage and Load Management (Rewards)	\$5,726,116	\$12,642,964
Building Codes and Appliance Standards	\$96,179	\$100,000
APS System Savings	\$0	\$0
EV Charging Demand Management ⁶	\$0	\$412,000
Energy and Demand Education*	\$4,496,345	\$4,050,000
Peak Rewards Initiative	n/a	\$0
Tribal Communities Energy Efficiency	n/a	\$1,000,000
Total DSM Initiatives	\$10,318,640	\$18,204,964
Demand Response		
Demand Response ⁷	\$1,947,043	\$3,544,026
Total Demand Response	\$1,947,043	\$3,544,026
Measurement, Evaluation & Research	\$3,348,877	\$3,006,000

⁵APS has stated in its 2021 DSM Plan that the Company is not requesting a performance incentive at this time. Includes the increase in budget for the Tribal Program as approved during the June 8 and 9, 2021, Open Meeting.

⁶Decision No. 77763 was issued on October 2, 2020. According to APS, a program implementation contractor was not selected until 2021. Therefore, there was no program spending in 2020.

⁷ The spending/budget for Demand Response includes Peak Solutions non-residential demand response program, Critical Peak Pricing rate plans, and TOU rates.

Updated Total DSM Portfolio**\$40,803,142****\$64,214,480****

*Includes online marketplace costs.

**Includes the increase in budget for the Tribal Program as approved during the June 8 and 9, 2021, Open Meeting.

73. Table 4 shows APS's 2021 DSM program costs by spending category.

Table 4

Program	Rebates and Incentives	Program Implementation	Program Marketing	Planning and Administration	Training/ Technical Assistance	Consumer Education	Financing	Total Program Cost
RESIDENTIAL								
Existing Homes	\$6,634,942	\$1,378,000	\$55,000	\$316,192	\$425,000	\$0	\$0	\$8,809,134
New Construction	\$2,580,000	\$440,000	\$20,000	\$275,000	\$20,000	\$0	\$0	\$3,335,000
Multi-Family EE	\$910,000	\$185,000	\$20,000	\$105,000	\$195,000	\$150,000	\$0	\$1,565,000
Limited Income Weatherization	\$6,059,000	\$305,000	\$0	\$235,000	\$51,000	\$350,000	\$0	\$7,000,000
Conservation Behavior	\$449,800	\$1,454,000	\$50,000	\$100,000	\$30,000	\$25,000	\$0	\$2,108,800
Energy Storage Pilot	\$600,000	\$256,150	\$43,850	\$100,000	\$0	\$0	\$0	\$1,000,000
Total Residential	\$17,233,742	\$4,018,150	\$188,850	\$1,131,192	\$721,000	\$525,000	\$0	\$23,817,934
NON-RESIDENTIAL								
Existing Facilities	\$6,233,072	\$2,806,000	\$450,000	\$400,000	\$1,180,000	\$100,000	\$0	\$11,169,072
New Construction/Major Renovation	\$1,198,740	\$788,000	\$20,000	\$92,000	\$50,000	\$0	\$0	\$2,148,740
Energy Information Services	\$94,000	\$205,500	\$10,000	\$5,000	\$15,000	\$0	\$0	\$329,500
Schools	\$1,044,244	\$750,000	\$30,000	\$45,000	\$90,000	\$35,000	\$0	\$1,994,244
Total Non-Residential	\$8,570,056	\$4,549,500	\$510,000	\$542,000	\$1,335,000	\$135,000	\$0	\$15,641,556
DSM INITIATIVES								
Demand Response	\$0	\$3,385,000	\$5,000	\$154,026	\$0	\$0	\$0	\$3,544,026
Rewards	\$8,075,000	\$4,317,964	\$50,000	\$200,000	\$0	\$0	\$0	\$12,642,964
Building Code & Appliance Standards	\$0	\$30,000	\$0	\$10,000	\$60,000	\$0	\$0	\$100,000
APS System Savings	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
EV Charging Demand Management	\$154,000	\$164,000	\$0	\$85,000	\$5,000	\$4,000	\$0	\$412,000
Energy & Demand Education	\$0	\$3,121,000	\$0	\$74,000	\$505,000	\$350,000	\$0	\$4,050,000
Peak Rewards	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Tribal Community EE	\$690,000	\$180,000	\$130,000	\$0	\$0	\$0	\$0	\$1,000,000
Totals for DSM Initiatives	\$8,919,000	\$11,197,964	\$185,000	\$523,026	\$570,000	\$354,000	\$0	\$21,748,990
Segment Totals	\$34,377,798	\$19,675,614	\$818,850	\$2,196,218	\$2,626,000	\$1,014,000	\$0	\$61,208,480

Program Costs	\$61,208,480
Measurement, Eval & Research	\$3,006,000
Updated Total 2020 DSM Budget	\$64,214,480

74. The updated APS total budget is \$64,214,480 with an updated amount of \$38,567,283 to be collected through the DSMAC. The increase in the budget and DSMAC collection amount

1 results in an increase to the current DSMAC rates from \$0.000982 per kWh and \$0.353 per kW to
2 \$0.001374 per kWh and \$0.508 per kW for 2021. The estimated monthly bill impact for residential
3 customers using an average of 1,064 kWh per month would be approximately \$1.46.

4 Staff Recommendations

5 75. Staff recommends approval of the updated total 2021 DSM Plan Budget of
6 \$64,214,480 with \$38,567,283 to be collected through the DSMAC. In addition, Staff recommends
7 approval of the updated DSMAC rates of \$0.001374 per kWh and \$0.508 per kW.

8 **REQUESTS FOR WAIVERS**

9 76. In response to Staff DRs, APS confirmed its desire to continue its ability to shift up
10 to 50 percent of budgeted funds between program segments and its ability to increase or decrease
11 incentives as previously approved by the Commission. This would allow APS to respond to market
12 changes, customer behavior, and program needs in a more efficient manner. Funds budgeted for the
13 Limited-Income weatherization Program and Schools Program are prohibited from being moved to
14 other programs.

15 Staff Recommendations

16 77. Staff recommends that APS be allowed to continue its ability to shift up to 50 percent
17 of budgeted funds between program segments with a 60-day notice to the Commission. In addition,
18 Staff recommends that APS be allowed to continue its ability to increase or decrease incentives with
19 a 60-day notice to the Commission. Staff further recommends that funds budgeted for the Limited-
20 Income Weatherization Program, School Programs, and Tribal Program are prohibited from being
21 moved to other programs.

22 **AMENDED 2021 DSM PLAN STAFF RECOMMENDATIONS**

23 78. Below are Staff's recommendations regarding the proposed new/modified
24 measures/programs, proposed budget, and proposed DSMAC, as discussed herein, to the APS 2021
25 DSM Plan.

- 26 • Staff recommends approval of the APS 2021 Amended 2021 DSM Plan as discussed
27 herein.

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- Staff recommends approval of the proposed continuation of the COVID-19 Quality Installation incentive of \$1,000 per unit for all qualifying 14 Seasonal EE Ratio ("SEER") units, and \$1,200 per unit for all qualifying equipment 15 SEER and above as part of the EHP.
- Staff recommends approval of the HVAC ducting in conditioned spaces measure as part of the Residential New Construction Program.
- Staff recommends approval of the proposed modifications to the MEEP.
- Staff recommends approval of the proposed continuation of the increased per home spending cap of \$9,000 until the end of 2021 for the Limited-Income Weatherization Program.
- Staff recommends approval of the proposed modification to offer an additional \$1,250 one-time upfront incentive to customers who agree to share a portion of their battery capacity to serve grid needs as part of the Storage Pilot.
- Staff recommends approval of the enhanced non-residential HVAC incentives due to COVID-19.
- Staff recommends approval of the ductless mini-split heat pumps as part of the EFP and NCMRP.
- Staff recommends approval of the hotel room occupancy sensors as part of the EFP and NCMRP.
- Staff recommends approval of the proposed pushback tugs as part of the EFP and NCMRP.
- Staff recommends approval of the proposed modification to the non-residential programs' delivery approach for HVAC measures.
- Staff recommends approval of APS's proposal to increase savings and participation goals for the Peak Solution non-residential demand response program.
- Staff recommends approval of the proposed System Savings projects for 2021, as discussed herein.
- Staff recommends approval of the proposed one-time incentive of \$250 for residential Level 2 EV charging stations for the EV Pilot.
- Staff recommends approval of APS's proposed Peak Rewards Initiative as discussed herein.
- Staff recommends that APS include any energy and peak-capacity savings from the Peak Rewards initiative in its annual DSM Reports.

- 1 • Staff recommends that APS be permitted to include the Expanded Tribal Program as
2 part of the 2022 DSM Plan.
- 3 • Staff recommends that APS include the results of Expanded Tribal Program in its
4 annual DSM Reports.
- 5 • Staff recommends that APS be permitted to include savings from iDSM technologies
6 when calculating its savings goals in this current 2021 DSM Plan and future DSM
7 Plans until further Order of the Commission.
- 8 • Staff recommends that APS be required to include any savings results from iDSM
9 technologies in its annual DSM Reports.
- 10 • Staff recommends approval of the APS 2021 DSM Plan updated total budget of
11 \$64,214,480 as discussed herein.
- 12 • Staff recommends approval of the APS 2021 DSM Plan updated total DSMAC
13 collection amount of \$38,567,283 as discussed herein.
- 14 • Staff recommends approval of the updated DSMAC of \$0.001374 per kWh and
15 \$0.508 per kW as discussed herein.
- 16 • Staff recommends that APS be allowed to continue its ability to shift up to 50 percent
17 of budgeted funds between program segments with a 60-day notice to the
18 Commission, with the exception of the Limited-Income Weatherization Program, the
19 Schools Program, and the Tribal Program.
- 20 • Staff recommends that APS be allowed to continue its ability to increase or decrease
21 incentives with a 60-day notice to the Commission.
- 22 • Staff recommends that the 2021 DSM Plan total budget, DSMAC collection amount,
23 and surcharges approved herein remain in effect until further Order of the
24 Commission.

CONCLUSIONS OF LAW

- 25 1. Arizona Public Service Company is an Arizona public service corporation within the
26 meaning of Article XV, Section 2 of the Arizona Constitution.
- 27 2. The Commission has jurisdiction over Arizona Public Service Company and the
28 subject matter of this application.
- 29 3. The Commission, having reviewed the application and Staff's Memorandum,
30 concludes that it is in the public interest to approve the amended Arizona Public Service Company
31 2021 Demand-Side Management Implementation Plan as discussed herein.

ORDER

IT IS THEREFORE ORDERED that the Arizona Public Service 2021 Demand Side Management Implementation Plan is approved as discussed herein.

IT IS FURTHER ORDERED that the Existing Homes Program is approved as discussed herein.

IT IS FURTHER ORDERED that continuation of the COVID-19 Quality Installation incentive of \$1,000 per unit for all qualifying 14 Seasonal EE Ratio ("SEER") units, and \$1,200 per unit for all qualifying equipment 15 SEER and above as part of the Existing Homes Program is approved as discussed herein.

IT IS FURTHER ORDERED that the HVAC ducting in conditioned spaces measure as part of the Residential New Construction Program is approved as discussed herein.

IT IS FURTHER ORDERED that the modifications to the Multi-Family Energy Efficiency Program are approved as discussed herein.

IT IS FURTHER ORDERED that continuation of the increased per home spending cap of \$9,000 until the end of 2021 for the Limited-Income Weatherization Program is approved as discussed herein.

IT IS FURTHER ORDERED that the modification to offer an additional \$1,250 one-time upfront incentive to customers who agree to share a portion of their battery capacity to serve grid needs as part of the Residential Energy Storage Pilot is approved as discussed herein.

IT IS FURTHER ORDERED that the enhanced non-residential HVAC incentives due to COVID-19 are approved as discussed herein.

IT IS FURTHER ORDERED that the ductless mini-split heat pumps as part of the Existing Facilities Program and New Construction and Major Renovation Program are approved as discussed herein.

IT IS FURTHER ORDERED that the hotel room occupancy sensors as part of the Existing Facilities Program and New Construction and Major Renovation Program are approved as discussed herein.

...

1 IT IS FURTHER ORDERED that the pushback tugs as part of the Existing Facilities
2 Program and New Construction and Major Renovation Program are approved as discussed herein.

3 IT IS FURTHER ORDERED that the modification to the non-residential programs' delivery
4 approach for HVAC measures is approved as discussed herein.

5 IT IS FURTHER ORDERED that Arizona Public Service Company's proposal to increase
6 savings and participation goals for the Peak Solution non-residential demand response program is
7 approved as discussed herein.

8 IT IS FURTHER ORDERED that the Energy Storage and Load Management Initiative
9 (Rewards) is approved as discussed herein.

10 IT IS FURTHER ORDERED that the System Savings projects for 2021 are approved as
11 discussed herein.

12 IT IS FURTHER ORDERED that the one-time incentive of \$250 for residential Level 2 EV
13 charging stations for the EV Charging Demand Management Pilot is approved as discussed herein.

14 IT IS FURTHER ORDERED that the Energy and Demand Education Program is approved
15 as discussed herein.

16 IT IS FURTHER ORDERED that Arizona Public Service Company shall be allowed to
17 pursue potential energy efficiency financing options.

18 IT IS FURTHER ORDERED that Arizona Public Service Company is required to file for
19 Commission approval any financing programs it intends to offer to customers.

20 IT IS FURTHER ORDERED that the Peak Rewards Initiative is approved as discussed
21 herein.

22 IT IS FURTHER ORDERED that Arizona Public Service Company shall include any energy
23 and peak-capacity savings from the Peak Rewards initiative in its annual DSM Reports.

24 IT IS FURTHER ORDERED that Arizona Public Service Company shall include the
25 Expanded Tribal Communities Energy Efficiency Program as part of the 2022 DSM Plan is
26 approved as discussed herein.

27 IT IS FURTHER ORDERED that Arizona Public Service Company shall include the results
28 of Tribal Communities Energy Efficiency Program in its annual DSM Reports.

1 IT IS FURTHER ORDERED that may include savings from iDSM technologies when
2 calculating its savings goals in this current 2021 DSM Plan and future DSM Plans until further Order
3 of the Commission.

4 IT IS FURTHER ORDERED that Arizona Public Service Company shall be required to
5 include any savings results from iDSM technologies in its annual DSM Reports.

6 IT IS FURTHER ORDERED that the 2021 DSM Plan updated total budget of \$64,214,480
7 is approved as discussed herein.

8 IT IS FURTHER ORDERED that the 2021 DSM Plan updated total DSMAC collection
9 amount of \$38,567,283 as discussed herein.

10 IT IS FURTHER ORDERED that the updated DSMAC of \$0.001374 per kWh and \$0.508
11 per kW as discussed herein.

12 IT IS FURTHER ORDERED that Arizona Public Service Company's ability to shift up to
13 50 percent of budgeted funds between program segments with a 60-day notice to the Commission is
14 approved as described herein.

15 IT IS FURTHER ORDERED that Arizona Public Service Company shall not shift funds
16 from the Limited-Income Weatherization Program, the Schools Program, and the Tribal Program.

17 IT IS FURTHER ORDERED that Arizona Public Service Company's ability to increase or
18 decrease incentives with a 60-day notice to the Commission is approved as described herein.

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1 IT IS FURTHER ORDERED that the 2021 DSM Plan total budget, DSMAC collection
2 amount, and surcharges approved herein, remain in effect until further Order of the Commission.

3 IT IS FURTHER ORDERED that this Decision shall become effective immediately.

4
5 **BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION**
6

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8 CHAIRWOMAN MÁRQUEZ PETERSON

COMMISSIONER KENNEDY

9
10 COMMISSIONER OLSON

COMMISSIONER TOVAR

COMMISSIONER O'CONNOR

11
12 IN WITNESS WHEREOF, I, MATTHEW J. NEUBERT,
13 Executive Director of the Arizona Corporation Commission,
14 have hereunto, set my hand and caused the official seal of this
15 Commission to be affixed at the Capitol, in the City of
16 Phoenix, this _____ day of _____, 2021.

17 MATTHEW J. NEUBERT
18 EXECUTIVE DIRECTOR

19 DISSENT: _____

20
21 DISSENT: _____

22 EOA:CLA:ihf/MAS
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27
28

1 Arizona Public Service Company
2 Docket No. E-01345A-20-0151

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